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ABSTRACT

Four studies on occupational and transfer student success at John Wood Community College (JWCC), a "contractual" college, are included in this document. Study topics were: (1) the relationship between American College Test (ACT) scores and final grade point average (GPA) among students who transfer to other institutions to complete bachelor's degrees; (2) predictors of academic success for transfer program students; (3) predictors of academic success for occupational/certificate students; and (4) differences between occupational and transfer program students. Students' ACT Social Science scores were found to be closely related to GPA's. For transfer program students, it was found that high GPA was positively related to high school class rank and negatively related to age, time elapsed since high school, marital status, and full-time employment; the contractual institution where students took a majority of their classes did not seem to be a determinant in final GPA at JWCC; and JWCC transfer program students were much like their traditional college student counterparts. For occupational students, it was found that GPA was positively related to high school rank, father's educational level, being female, and being employed part-time. Differences between transfer and occupational students were indicated: transfer program students had significantly higher high school GPA's and class ranks and came from families with significantly higher incomes. (TR)

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[STUDIES OF OCCUPATIONAL AND TRANSFER STUDENT SUCCESS

AT JOHN WOOD COMMUNITY COLLEGE]

THE RELATION BETWEEN ACT SCORES AND FINAL GPA AMONG JWCC BACCALAUREATE - TRANSFER STUDENTS

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By

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December 16, 1977

JC 780 190

Since the contractual arrangement employed by John Wood Community College represents a unique approach to post-secondary education, a number of investigations are currently in progress to determine if the "typical" JWCC student differs substantially from other college students. For instance, do the traditional predictors of academic performance among college students, such as high school grade point average and ACT scores, accurately predict academic achievement among JWCC students? This investigation concerned the academic performance of the first group of baccalaureate-transfer students who completed programs through JWCC prior to September, 1977.

In order to assess the role of ACT scores in the prediction of academic success among JWCC students, the study was undertaken to quantify the relationship between ACT scores of academic students (candidates for A.A., A.S. degrees) and final college grade point average. As a part of a general investigation of factors that contribute to academic success, final JWCC grade point averages were obtained for 50 baccalaureate-transfer students who completed two years of college before September, 1977. Of that number, JWCC has access to the ACT scores of only 39 students, and English, Math, Social Sciences, Natural Science and Composite ACT scores were correlated with the 39 cumulative grade point averages.

Table 1 includes the means and standard deviations for each of the ACT predictors and cumulative GPA.

TABLE 1

DESCRIPTIVE STATISTICS

Variable	Mean	Standard Deviation
ACT English	18.512	4.994
ACT Math	20.641	7.179
ACT Social Science	19.974	6.764
ACT Natural Science	22.102	5.711
ACT Composite	20.435	5.030
GPA	2.885	.562

Table 2 includes the correlations between the five ACT scores and cumulative GPA for the 39 students. Correlations that were statistically significant are noted by one or more asterisks. In all instances, a one-tailed test for statistical significance was applied; since ACT scores ordinarily are indicative of academic performance, there was a basis for assuming they would correlate highly with GPA in this instance.

TABLE 2

CORRELATION COEFFICIENTS

Variable	Relation to GPA (df = 38)
ACT English	.405**
ACT Math	.458***
ACT Social Science	.610***
ACT Natural Science	.300*
ACT Composite	.549***

*sig. at .05
**sig. at .01
***sig. at .005

As the results indicate, the variable that was most closely related to a student's final grade point average was the ACT Social Science score. In fact, the correlation coefficient suggests that over 37 percent of the variance associated with the baccalaureate-transfer students' grade point averages could be explained by the ACT Social Science scores alone.

As was indicated earlier, because the students whose academic performance was studied represented the first group of graduating baccalaureate-transfer students, the investigation's generalizability may be questioned on the grounds that an insufficient number of ACT scores were analyzed. Nevertheless, a sample of 39 sets of scores and grade point averages would certainly seem to approach a normal distribution. Perhaps additional studies involving a larger number of ACT scores and grade point averages can be undertaken to determine if there is a combination of ACT scores that best predicts academic success among the JWCC baccalaureate-transfer students.

Predictors of Academic Success Among John Wood Community College Baccalaureate - Transfer Students

by

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and

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December 21, 1977

Rationale for the Investigation

As John Wood Community College prepares to complete it's third year of operation as a common market institution, it becomes increasingly important to analyze the academic performance of the students. Until recently, for instance, the college had not operated for a sufficient length of time to be able to determine why JWCC students are or are not academically successful. Moreover, few institutional research efforts had been directed toward such questions as: (1) Do the traditionally employed predictors of college success, such as high school grade point average, hold true for the common market student? and (2) Does the common market delivery system, as a result of the students' attending different institutions with the possibility of different academic performance standards, in and of itself affect the JWCC students' academic achievement? In order to answer these questions and to identify the best combination of factors predictive of academic performance among JWCC baccalaureate - transfer students, the following investigation was designed.

Procedures

The academic achievement of the first group of JWCC baccalaureate - transfer students to complete two years of study by June, 1977, was analyzed (n=50). In order to determine which factors were most indicative of academic performance, the following variables were correlated with the students' final cumulative

grade point average upon the completion of two years of college coursework: high school grade point average, high school rank, father's educational level, mother's educational level, sex of student, age, years elapsed from the students' high school graduation until date of entry at JWCC, marital status, number of brothers and sisters, student's family income, size of high school graduating class, size of hometown, distance from hometown to JWCC, primarily attended Quincy College, Culver-Stockton College, or Hannibal-LaGrange College, employed full-time as a JWCC student, and employed part-time as a JWCC student. Because so few ACT scores has been collected for this first group of baccalaureate - transfer students, the relation of ACT scores to final GPA among the 50 students was not studied.

Multiple regression was used to: (1) indicate the correlations and intercorrelations among predictor and criterion (JWCC GPA) variables; (2) provide analysis of variance data that would determine the extent of the multiple correlation and regression; and (3) generate a regression equation that would "weight" the predictor variables so that grade point averages might be predicted from a formula. In all instances where appropriate, statistical significance levels were established at .05.

Results

Prediction of JWCC Final Grade Point Average

Table 1 presents analysis of variance figures for the regression of final grade point average upon all of the predictors. The data revealed that the multiple correlation and regression were statistically significant well beyond the .05 alpha level, and the variables accounted for over 60 percent of the variance in JWCC GPA.

Table 1

Regression of JWCC GPA Upon Predictor Variables

Source	SS	DF	MS	F
Regression	9.448	14	.674	3.893*
Residual	6.067	35	.173	

*sig. at .05; multiple r = .780; r^2 = .608

Table 2 includes analysis of variance figures for the regression of GPA upon the six best predictors (those that contributed significantly and independently to the regression). In all appropriate instances, the F-ratio exceeded the critical value necessary for significance at .05. Thus, the regression coefficients for all six predictors were statistically significant.

Table 2

Regression of JWCC GPA Upon

Six Predictors

Source	SS	DF	MS	F
Regression	8.390	.6	1.398	8.439*
Residual	7.125	43	.165	

Variables in the Equation

Variable	B	F
High School Rank	.0116	20.591*
Years Elapsed Since H.S.	.0725	12.363*
Sex of Student	.3222	6.584*
Father's Education	-.1536	6.503*
Employed Part-Time	.3161	4.943*
Size of H. S. Class	.0626	2.564*
(Constant)	1.1882	

*sig. at .05; multiple r = .735; r^2 = .540

The regression equation that could best predict grade point averages of JWCC baccalaureate - transfer students thus became: JWCC GPA = 1.1882 + .0116 (H. S. Rank) + .0725 (Years Elapsed Since H. S.) + .3222 (Sex Dichotomy score) + -.1536 (Father's Educational Level) + .3161 (Part-time Employed dichotomy score) + .0626 (High School Class Size). Results suggested that the baccalaureate student who achieves a high cumulative GPA:

(1) will have earned a high class rank in high school,

(2) will have allowed a number of years since high school graduation to elapse before returning to college,

(3) will be female,

(4) will come from a family where the father had less than a high school education,

(5) will be employed part-time rather than on a full-time basis, and

(6) will come from a large high school.

In addition, two positive and significant correlates of JWCC GPA that did not appear in the equation were high school GPA and age; the better students at JWCC had earned high grade point averages in high school and were older.

Table 3 includes descriptive statistics for the sample of JWCC baccalaureate - transfer students. In addition to the variables reported in the table, the "typical" student came from a family whose income ranged from $12,000 - $15,000 per year, came from a high school senior class that averaged

between 150 and 250 students, came from a hometown that had a population range of 5,000 - 15,000 (although most students came from Quincy), and lived from 5-15 miles away from the JWCC administrative offices (although most lived in Quincy). For nearly 75 percent of the students, Quincy College was the primary attendance center.

Table 3

Descriptive Statistics

Variable	Mean
JWCC Grade Point	2.8851
H. S. Grade Point	0112
H. S. % Rank	64.0200
Father's Education	3.1200 (high school completion)
Mother's Education	3.300 (high school completion)
Years elapsed since H. S.	2.520
Age	20.920
Marital Status	1.140 (1 = single, 2 = married)
No. Brothers - Sisters	3.360

Among the students whose performance was investigated, the following were statistically significant correlations (exceeded .05 alpha level):

(1) The high school GPA was positively related to the high school percentile rank.

(2) The high school GPA was negatively related to:

(a) age (older students had poorer h. s. GPA),

(b) amount of time elapsed since high school (students with high grade point averages in high school did not wait so long to attend college),

(c) marital status (JWCC single students had better h. s. GPA), and

(d) full-time employment (JWCC students not employed full-time had earned better grade averages in high school).

(3) High school rank was positively related to the size of the high school class attended by the student (JWCC students who had high class rankings came from larger high schools).

(4) High school rank was negatively related to age, years elapsed since high school graduation, marital status (JWCC single students had better class rankings), and full-time employment as a JWCC student.

(5) The father's educational level was positively related to the student's family income and part-time employment (JWCC students who were employed part-time as

opposed to full-time or not at all came from families where the father had a high level of education).

(6) The father's educational level was negatively related to the age of the student (the older the student, the less the father's education) and years elapsed since high school (the more years that had elapsed, the less the father's education).

(7) The mother's educational level was positively related to the students' family income and the distance to the JWCC campus for the student (the higher the mother's education, the further the student's hometown was from Quincy).

(8) The mother's educational level was negatively related to age of the student, years elapsed since high school, the JWCC student's being married, the number of brothers and sisters in the student's family, and attendance at Quincy College (students who came from a family where the mother's educational level was low did not attend Quincy College).

(9) Females came from families where a higher income was reported but were less frequently employed than were males.

(10) In addition to the correlations previously described, age was positively related to:

(a) the number of years that had elapsed from high school graduation to date of entry at JWCC,

(b) being married,

(c) coming from a large hometown, and

(d) being employed on a full-time basis.

(11) Age was negatively related to:

(a) family income reported,

(b) distance from hometown to JWCC (older students live in Quincy), and

(c) being employed part-time.

(12) In addition to the correlations previously discussed, the number of years that had elapsed from the JWCC students' high school graduation and entry as a JWCC student positively related to being married, being from a large hometown, and being employed full-time.

(13) A high amount of elapsed time from high school graduation to college was negatively related to the student's reported family income, being from a hometown far from Quincy, and being employed part-time.

(14) In addition to the results pertaining to marital status already described, being married was positively related to attendance at Quincy College and being employed full-time and was negatively related to the JWCC student's reported family income.

Conclusion

In addition to the conclusions that can be reached regarding "typical" characteristics among baccalaureate - transfer students, perhaps two final items are notable. First, the contractural institution through which the student enrolls for the majority of his/her classes does not appear to be a determinant of final grade point average at JWCC. This finding would imply

that there must be an acceptable level of consistent grading standards being applied at Quincy College, Culver-Stockton College, and Hannibal-LaGrange College and suggests that the common market delivery system has little or no effect upon the academic standards imposed upon JWCC students. Second, the investigation reveals that the JWCC baccalaureate - transfer student is very much like his/her traditional college student counterpart: High School grade point averages and class rankings are clearly the best indicators of the student's chances for academic success. Once JWCC has access to more ACT scores of its students, it would appear likely that there will be more documentation for the claim that JWCC students are no different, in the most important respects, from other college and university students.

Predictors of Academic Success Among JWCC Occupational - Certificate Students

by

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and

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December 23, 1977

Rationale for the Investigation

As John Wood Community College prepares to complete its third year of operation, it becomes increasingly important to analyze the academic performance of the students. Since the institution has not been operational for a long period of time, few research efforts have been directed toward such questions as: (1) Do the traditionally employed predictors of college success, such as high school grade point average, hold true for the common market student? (2) Does the common market delivery system itself affect JWCC students' chances of academic success? and (3) What intellectual and nonintellectual achievement factors best predict academic success among JWCC students?

A recent investigation of baccalaureate - transfer student performance at JWCC revealed that traditional indicators of college success (high school GPA and rank) were significant correlates of achievement of another large portion of the JWCC student population: occupational - certificate students. Specifically, the purpose of the study was to identify: (1) the correlates of academic success among the JWCC occupational - certificate student, and (2) the combination of factors that best predicts successful academic achievement by this group of JWCC students.

Procedures

The academic achievement of the first group of JWCC students to complete occupational certificate programs by September, 1977, was analyzed (n = 70). In order to determine which factors

were most indicative of academic performance, the following variables were correlated with the student's final cumulative grade point average upon the completion of an occupational or certificate program: high school grade point average, high school rank, father's educational level, mother's educational level, sex of student, age, years elapsed from the student's high school graduation until date of entry at JWCC, marital status, number of brothers and sisters, student's family income, size of high school graduating class, size of hometown, distance from hometown to JWCC, primarily attended Gem City, Quincy Technical, or Culver-Stockton, employed full-time as a JWCC student, and employed part-time as a JWCC student.

Multiple regression was used to: (1) indicate the correlations and intercorrelations among predictor and criterion (JWCC GPA) variables; (2) provide analysis of variance data that would determine the extent of the multiple correlation and regression; and (3) generate a regression equation that would "weight" the predictor variables so that grade point averages might be predicted from a formula. In all instances where appropriate, statistical significance levels were established at .05.

Results

Prediction of JWCC Final Grade Point Average

Table 1 presents analysis of variance figures for the regression of final grade point average upon all of the predictors. The data revealed that the multiple correlation

and regression were statistically significant well beyond the .05 alpha level, and the variables accounted for over 55 percent of the variance associated with final JWCC GPA.

Table 1

Regression of JWCC GPA Upon Predictor Variables

Source	SS	DF	MS	F
Regression	18.703	17	1.100	3.804*
Residual	15.038	52	.289	

*sig. at .05; multiple r = .744; r^2 = .554

Table 2 includes analysis of variance figures for the regression of GPA upon the five best predictors (those that contributed significantly and independently to the regression). In all appropriate instances, the F-ratio exceeded the critical value necessary for significance at .05. Thus, the regression coefficients for all five predictors were statistically significant.

Table 2

Regression of JWCC GPA Upon

Six Predictors

Source	SS	DF	MS	F
Regression	14.580	5	2.916	9.738*
Residual	19.162	64	.299	

Variables in the Equation

Variable	B	F
High School GPA	.1922	2.454*
Attended Quincy Tech (1=No, 2=Yes)	.4229	9.908*
High School Rank	.0037	4.232*
No. Brothers - Sisters	.0666	4.016*
Attended Culver-Stockton (1=No, 2=Yes)	.4340	2.470*
(Constant)	.6658	

*sig. at .05; multiple r = .657; r^2 = .432

The regression equation that could best predict grade point averages of JWCC occupational - certificate students thus became: JWCC GPA = .6658 + .1922 (H. S. GPA) + .4229 (Attended Quincy Tech. dichotomy score) + .0087 (H.S. Rank) + .0666 (No. Brothers - Sisters) + .4340 (Attended Culver-Stockton College dichotomy score). Results suggested that the occupational certificate student who achieves a high final cumulative GPA:

(1) will have earned a high grade point average and class rank in high school,

(2) will primarily attend either Quincy Tech. or Culver-Stockton College, and

(3) will have at least three or more brothers and sisters.

In addition, sex of the student and high school graduating class size correlated positively with JWCC GPA; the better occupational - certificate students were often female and had attended large high schools.

Student Characteristics

Table 3 includes descriptive statistics for the sample of JWCC occupational - certificate students. In addition to the variables reported in the table, the "typical" student came from a family whose income ranged from $8,000 - $12,000 per year, came from a high school senior class that averaged between 150 and 250 students, came from a hometown that had a population range of 5,000 - 15,000 (although most students came from Quincy), and lived from 5-15 miles away from the JWCC administrative offices (although most lived in Quincy). For nearly 70 percent of the students, Quincy Tech. was the primary attendance center.

Table 3

Descriptive Statistics

Variable	Mean	
JWCC Grade Point	2.852	
H. S. Grade Point	2.519	
H. S. % Rank	40.942	
Father's Education	2.814	(below high school completion)
Mother's Education	2.985	(slightly below high school completion)
Years elapsed since h. s.	3.400	
Age	20.157	
Marital Status	1.185	(1=single, 2=married)
No. Brothers-Sisters	2.785	

Correlations Among Predictors

Among the occupational - certificate students whose academic performance was studied, the following were statistically significant correlations (exceeded the critical value necessary for significance at .05):

(1) The high school GPA was positively related to:

(a) high school percentile rank.

(b) father's educational level (the higher the father's educational level, the higher the JWCC student's high school GPA),

(c) being female (female occupational-certificate students had earned higher high school grade point averages), and

(d) being employed part-time (JWCC students employed part-time as opposed to full-time or not at all had higher grade averages in high school).

(2) In addition to being related to high school GPA, high school rank was positively related to being female and attending Gem City as the primary contractual institution.

(3) The level of educational achievement of the JWCC occupational-certificate student's father was positively related to:

(a) the mother's educational level,

(b) age of the JWCC student (older students had fathers who had completed a higher level of education),

(c) the student's reported family income (the higher the father's education, the higher the student's family income),

(d) high school graduating class size (students who attended large high schools had fathers with the highest educational level),

(e) size of the JWCC student's hometown,

(f) attendance at Culver-Stockton, and

(g) being employed part-time as a JWCC student

(4) The father's educational level was negatively correlated with the amount of time that had elapsed from the JWCC student's high school graduation and entry at JWCC and marital status (students whose fathers educational achievement was low were married and entered JWCC after considerably more time had elapsed).

(5) The mother's educational level was positively related to:

(a) income of the student's family,

(b) size of the student's hometown,

(c) size of the student's high school graduating class,

(d) attendance at Culver-Stockton, and

(e) being employed part-time (rather than full-time or not at all).

(6) The mother's educational level was negatively related to the amount of time that elapsed between the JWCC student's high school graduation and entry as a college student.

(7) Sex was positively related to:

(a) age (females were older),

(b) size of the hometown (females came from larger hometowns),

(c) attendance at Culver-Stockton (more females attended Culver), and

(d) part-time employed (more females were employed part-time).

(8) Sex was negatively related to the amount of time that elapsed from high school to JWCC attendance (females entered JWCC with less time elapsed; males entered with more).

(9) Sex was negatively correlated with attendance at Quincy Tech (males attended Quincy Tech).

(10) In addition to correlations reported earlier, age was positively related to size of the student's hometown, attendance at Gem City, attendance at Culver-Stockton, and full-time employment.

(11) Amount of time that elapsed between high school and JWCC attendance was positively related to marital status and number of brothers and sisters. Students that waited longer to attend college were married and had come from large families while single.

(12) Amount of time elapsed was negatively correlated with:

(a) hometown size (coming from a large town meant a short time lapse),

(b) attendance at Quincy Tech. (attendance at Quincy Tech. meant a short time lapse), and

(c) part-time employment (the greater the time lapse, the less frequently the JWCC student was employed part-time).

(13) In addition to the correlations reported earlier, being married was negatively related to attendance at Quincy Tech. and Culver-Stockton and part-time employment.

(14) The number of the JWCC student's brothers and sisters was negatively correlated with full-time employment (students who came from large families were less likely to be employed full-time).

(15) In addition to the data reported earlier, income of the student's family was positively related to size of the student's hometown, attendance at Culver-Stockton, and being employed part-time (as opposed to full-time or not at all).

(16) Size of the student's high school graduating class, in addition to the correlations described earlier, was positively related to the size of the student's hometown, attendance at Quincy Tech., and being employed full-time. Size of the graduating class was negatively correlated with distance of the student's hometown to JWCC.

(17) Distance of the student's hometown to JWCC was positively related to attendance at Quincy Tech.

(18) In addition to the correlations reported earlier, attendance at Quincy Tech. was positively related to being employed both full-time and part-time as a JWCC student. Attendance at Culver-Stockton was also positively correlated with being employed full-time and being employed part-time.

DIFFERENCES AMONG OCCUPATIONAL AND BACCALAUREATE JWCC STUDENTS

by

Dan Hayes

December 29, 1977

The purpose of this investigation was to compare academic achievement, socio-economic, and demographic characteristics among two JWCC student groups: baccalaureate-transfer and occupational-certificate students. The study was undertaken to determine in what respects the two groups are different and/or similar.

Procedures

Student characteristics associated with the first groups of baccalaureate-transfer (n = 50) and occupational-certificate students (n = 70) to complete programs by June, 1977, were analyzed. In order to determine whether differences existed among the two groups, data was collected for each of the following variables: final JWCC grade point average, high school grade point average, high school percentile rank, father's educational achievement level, mother's educational achievement level, age, years elapsed from the student's attendance in high school until date of entry at JWCC, marital status, number of brothers and sisters, student's family income, size of high school graduating class, size of hometown, distance from hometown to JWCC offices, employed full-time as a JWCC student, and employed part-time as a JWCC student. Table 1 indicates how certain variables were coded for computer analysis; in all other instances, the variables were continuous in nature

and were so coded.

TABLE 1

CODED VARIABLES

Variable	Coding
Father's, Mother's Educational Level (highest level completed)	1 = grade school or below, 2 = jr. high, 3 = sr. high, 4 = 2 yrs. post secondary, 5 = 4 yrs. college, and 6 = professional
Marital Status	1 = single, 2 = married
Income of Family	1 = under $5,000, 2 = $5-8,000, 3 = $8-12,000, 4 = $12-15,000, 5 = $15-20,000, 6 = over $20,000
Size of H.S. Graduating Class	1 = 1-10, 2 = 11-25, 3 = 26-50, 4 = 51-250, 5 = 251-500, and 6 = over 500
Size of Hometown	1 = 1-500, 2 = 501-5,000, 3 = 5001-20,000, 4 = 20,001-40,000, 5 = 40,001-75,000, and 6 = over 75,000
Distance of Hometown to JWCC	1 = 0-5 miles, 2 = 6-10, 3 = 11-20, 4 = 21-50, 5 = 51-100, and 6 = over 100
Full-Time Employed as JWCC Student	1 = no, 2 = yes
Part-Time Employed as JWCC Student	1 = no, 2 = yes

Independent t tests (df = 118) were employed to determine if the baccalaureate-transfer and occupational-certificate students differed significantly on each of the variables. In

all instances, a two-tailed statistical test was applied, and the .05 alpha level was employed as the minimum level for statistical significance.

Results

Table 2 presents the results of the investigation.

TABLE 2

DIFFERENCES AMONG OCCUPATIONAL AND BACCALAUREATE STUDENTS, JWCC

	Occ.-Cert. Means, Stand. Deviations		Bac.-Tran. Means, Stand. Deviations		t
JWCC GPA	2.852	(.699)	2.885	(.562)	.27
HS GPA	2.519	(.745)	3.011	(.604)	3.80**
HS % Rank	40.942	(22.654)	64.020	(24.893)	5.23**
Fath. Ed.	2.814	(1.067)	3.120	(1.081)	1.53
Moth. Ed.	2.985	(1.014)	3.300	(.909)	1.73
Age	20.157	(5.263)	20.920	(3.141)	.91
Years Elapsed	3.400	(7.620)	2.520	(3.265)	.76
Mar. Status	1.185	(.687)	1.140	(.350)	.43
Bro. Sis.	2.785	(2.049)	3.360	(2.647)	1.33
Income Family	3.642	(1.330)	4.380	(1.455)	2.85*
HS Size	3.785	(1.614)	4.060	(1.608)	.91
Hometown Size	4.171	(1.910)	4.480	(1.717)	.84
Dist. to JWCC	2.771	(1.819)	2.200	(1.577)	1.78
Full Employ.	1.057	(.335)	1.100	(.303)	.73
Part Employ.	1.585	(.551)	1.660	(.478)	.24

*sig. at .01, two-tailed test (df = 118)
**sig. at .001, two-tailed test (df = 118)

While the scores for the baccalaureate-transfer students were higher on nearly all variables, the two student groups differed significantly on only three items: high school grade point average, high school percentile rank, and family income. In other words, baccalaureate-transfer students entered JWCC with significantly higher high school grade averages and class ranks and came from families with significantly higher income than occupational-certificate students. In all other instances, the differences in the mean scores among the two groups were insignificant; chance alone could have accounted for the differences.

While significant differences among the two groups occurred in only three instances, two other results seem notable. The fathers and mothers of baccalaureate-transfer students had higher educational achievement than parents of occupational-certificate students, and the results approached statistical significance. Also, there was considerably more variability in occupational-certificate student scores relative to age and the number of years that elapsed from high school to attendance at JWCC. This would indicate that the range in scores among the occupational students is much greater than range in scores for baccalaureate students for these two variables. In general, however, the results support the notion that there are few socio-economic and demographic differences among the two groups of JWCC students.